

WHAT IS CLAIMED IS:

1. A method for presenting an optimized selection of alternatives from a plurality of alternative choices to a user through an electronic device, comprising the steps of:
providing an objective model for said plurality of alternative choices, said objective model reflecting at least user-specific weighting factors for said alternative choices;
applying said objective model to a first ordered selection of choices to derive a recommended selection of choices of optimized order, said optimized order being determined by said objective model; and
maintaining said recommended selection of choices for presentation to said user through said electronic device substantially in said optimized order.
2. The method of claim 1 wherein said objective model further reflects third-party weighting factors.
3. The method of claim 2 wherein access to said plurality of alternative choices is provided by a service operator and said method further comprises the step of including in said objective model a weighting factor reflecting preferences of said service operator in presenting alternatives to said user.
4. The method of claim 3 wherein at least one of said alternative choices is provided by a third-party advertiser and said method further comprises the step of including in said objective model a weighting factor reflecting preferences of said third-party advertiser in presenting alternatives to said user.
5. The method of claim 2 wherein said objective model includes an Objective Function of the form:

$$\sum (v_i + \lambda) b_i e^{-\gamma d_i}$$

in which the parameters b_i reflect said user-specific weighting factors, the parameters v_i reflect said third-party weighting factors, the variables d_i represent an ordering of said plurality of alternative choices, and the parameters λ and γ are empirically adjusted constants.

6. The method of claim 5 wherein the summation in the Objective Function runs only over end alternatives.

7. A method for presenting an optimized selection of alternatives from a plurality of alternative choices to a user through an electronic device, comprising:

providing an objective model for said plurality of alternative choices, said objective model including a plurality of user-specific weighting factors;

providing a statistical model for setting the values of at least some of said user-specific weighting factors and applying said statistical model for setting said values;

applying said objective model with said values set by said statistical model to a first ordered selection of choices to derive a recommended selection of choices of optimized order, said optimized order being determined by said objective model; and

maintaining said recommended selection of choices for presentation to said user through said electronic device substantially in said optimized order.

8. The method of claim 7 wherein said statistical model includes an estimator of Empirical Bayes formulation for setting said values.

9. The method of claim 7 wherein said objective model further reflects third-party weighting factors.

10. The method of claim 9 wherein said objective model includes an Objective Function of the form:

$$\sum (v_i + \lambda) b_i e^{-\gamma d_i}$$

in which the parameters b_i reflect said user-specific weighting factors, the parameters v_i reflect said third-party weighting factors, the variables d_i represent an ordering of said plurality of alternative choices, and the parameters λ and γ are empirically adjusted constants.

11. The method of claim 10 wherein said statistical model includes an estimator of Empirical Bayes formulation for determining said parameters b_i .

12. A method for presenting an optimized selection of alternatives from a plurality of alternative choices to a user through an electronic device, comprising the steps of:

providing an objective model for said plurality of alternative choices;
applying said objective model to a first ordered selection of choices to derive a recommended selection of choices of optimized order, said optimized order being determined by said objective model;
presenting said recommended selection of choices to said user substantially in said optimized order for further selection of an end alternative by said user;
when said end alternative calls for entry of data by said user, applying said objective model to derive a recommended selection of prefill data objects; and
presenting said recommended selection of prefill data objects to said user.

13. A method for presenting an optimized selection of alternatives from a plurality of alternative choices to a user through an electronic device having a display capable of showing only a characteristic number of choices to the user at a time, comprising the steps of:
providing an objective model for said plurality of alternative choices, said objective model reflecting at least user-specific weighting factors for said alternative choices;
applying said objective model to a first ordered selection of alternative choices to derive a recommended selection of alternative choices of optimized order, said optimized order being determined by said objective model; and
maintaining at least a portion of said recommended selection of alternative choices for presentation to said user a fixed number at a time substantially in said optimized order, said fixed number being at most the characteristic number said device is capable of displaying at a time.

14. The method of claim 13 wherein said objective model further reflects third-party weighting factors.

15. The method of claim 13 further including:

providing a statistical model for setting the values of at least some of said user-specific weighting factors and applying said statistical model for setting said values.

16. The method of claim 15 wherein said statistical model includes an estimator of Empirical Bayes formulation for setting said values.

17. A method for presenting an optimized selection of alternatives from a plurality of alternative choices to a user through an electronic device, said plurality of alternative choices forming an initial ordered data structure, the method comprising:

defining a plurality of characteristic groups of users;

for a given user, transforming said initial ordered data structure into a reduced data structure associated with at least one of said characteristic groups;

applying an objective model to said reduced data structure, said objective model including parameters particularized to said given user, to derive a recommended data structure for said given user.

18. The method of claim 17, further comprising:

applying a content filter to at least one of said initial data structure, said reduced data structure and said recommended data structure, thereby to provide a refined recommended data structure.

19. The method of claim 18, wherein said content filter is applied to one of said initial data structure and said reduced data structure before said objective model is applied.

20. The method of claim 18, wherein said content filter is applied after said objective model is applied.

21. A method for presenting an optimized selection of alternatives from a plurality of alternative choices to a user through an electronic device, said plurality of alternative choices forming an initial ordered data structure, the method comprising:

applying a content filter to said initial ordered data structure to define a reduced data structure; and

applying an objective model to said reduced data structure, said objective model including parameters particularized to a given user, to derive a recommended data structure for said given user.

22. In a system in which a user can access a number of software applications with an electronic device, said device having a display for presenting the user with a number of alternative choices, a method for providing data to a software application in response to a request for data entry by said software application, comprising:

determining a characteristic type of data appropriate for filling said request for data entry;
associating a probability of relevance to a plurality of other instances of data of said
characteristic type associated with said user; and
ordering said plurality of other instances substantially in accordance with said probability of
relevance for presentation to said user.